



**UNITED STATES DEPARTMENT OF COMMERCE**  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
097049,121	03/27/98	CLARK	R 2119-107P

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EXAMINER  
PHAN, J

ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 04/14/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/049,121**

Applicant(s)  
**Clark et al**

Examiner  
**JAMES PHAN**

Group Art Unit  
**2872**



☒ Responsive to communication(s) filed on Mar 3, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-20 is/are pending in the application.

Of the above, claim(s) 19 and 20 is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-7 and 11-18 is/are rejected.

☒ Claim(s) 8-10 is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Applicant's election of Group I in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

3. Claims 1 and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by La Fiandra.

La Fiandra discloses a deformable mirror which comprises a vertical comb drive (Figs. 1 and 6) having cavities 14 and teeth 10; and a substrate 44 having a reflective surface 43 (Figs. 5A-5B) attached to the drive.

In re claim 17 the substrate 44 has been taken as a top layer.

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4. Claims 1, 2-5, 7, 11-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kiang et al. See Figs 2 and 4-7 and the accompanying text.

In re claims 4 and 17 a layer of electrical conductive material is inherently provided on the tops of elements 40 (Fig. 2) since they are not made of electrical conductive material.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kiang et al.

Kiang et al, in Fig. 2, shows all claimed features, i.e. a mirror surface 30 attached to a comb drive including a first array of stationary elements 42, a second array of moving elements 40 and a support 36. Kiang et al does not state that the stationary elements 42 and the moving elements 40 are circular. However, the use of circular elements is considered an obvious matter of choice since it does not provide a special advantage or an unexpected result over the use of planar elements.

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***Allowable Subject Matter***

7. Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: none of the cited reference teaches or fairly suggests a deformable mirror having the structure specified in claims 8-10

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Phan whose telephone number is (703) 308-4810. The examiner can normally be reached on M-F from 9:30 to 6:00. The fax phone number for this Group is (703) 308-7722.

Phan, J.

April 10, 1999

  
**James Phan**  
**Primary Examiner**